

St. Claret College

Autonomous, Bengaluru

ROLL NO:

DATE:

PG END SEMESTER EXAMINATION-JULY/AUGUST 2025

M.Com. SECOND SEMESTER

MCO 2224: RISK MANAGEMENT AND DERIVATIVES

TIME: 3 hours.

MAX. MARKS: 70

This paper contains TWO printed pages and FOUR parts

Instructions:

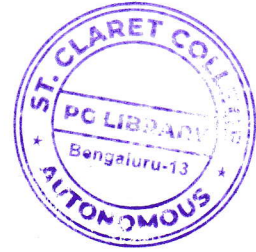
1. Verify and ensure that the question paper is completely printed.
2. Any discrepancies or questions about the exam paper must be reported to the COE within 1 hour after the examination.
3. Students must check the course title and course code before answering the questions.

PART-A

Answer SIX questions out of EIGHT. Each answer carries TWO marks.

[2x6 = 12]

1. Define Business Risk and mention any two of its sources.
2. What is Credit Risk? Give two components of credit risk.
3. Write a short note on Value at Risk (VaR).
4. What is Operational Risk? Mention any two causes.
5. State any two economic benefits of derivatives.
6. Differentiate between Futures and Options.
7. Define Mark to Market with a simple example.
8. What is meant by Credit Risk Score by CIBIL?



PART-B

Answer any THREE questions out of FIVE. Each answer carries EIGHT marks.

[8x3=24]

9. Explain the steps in the risk management process. How does risk management help in business and finance?
10. Describe the Altman's Z Score model and explain how it is used for credit risk assessment with an example.
11. What is Value at Risk (VaR)? Explain the different methods of calculating VaR.
12. Explain the different types of derivative instruments and the role of participants in the derivatives market.
13. What are Options? Explain the Black-Scholes Option Pricing Model with a numerical illustration.

PART-C

Answer any TWO questions out of THREE. Each answer carries TEN marks. [10X2=20]

14. Discuss the various types, sources, and classification of business risks. Also explain the challenges faced in managing business risks.
15. What is Credit Risk Management? Explain the tools and techniques of credit risk management along with the functioning of credit risk rating systems.
16. Explain the concept of swaps. Discuss the different types of swaps and illustrate the pricing mechanism of a plain vanilla interest rate swap with a hypothetical example.

PART-D

Answer the following.

[14X1=14]

17. Case Study: Credit Risk and Derivatives Application at Green Leaf Agro Ltd.

Green Leaf Agro Ltd. is an agri-processing company that sources raw materials from multiple states and sells processed goods across India. To support expansion, the company has recently taken a term loan of ₹10 crores from a commercial bank.

The credit analyst at the bank has been asked to evaluate the credit risk associated with Green Leaf Agro Ltd. using the Altman's Z-Score model. At the same time, the finance manager of Green Leaf is considering using derivatives, especially call options, to hedge against a potential rise in the price of wheat, which is their key raw material.

Part A – Credit Risk Assessment Using Altman's Z-Score

The following financial data is available for Green Leaf Agro Ltd.:

Working Capital = ₹2 crores

Total Assets = ₹12 crores

Retained Earnings = ₹1.5 crores

EBIT = ₹1.2 crores

Market Value of Equity = ₹5 crores

Total Liabilities (Book Value) = ₹7 crores

Sales = ₹18 crores

Q1: Calculate Altman's Z-Score and interpret the result.

Part B – Using Options for Hedging

Green Leaf is concerned that wheat prices, currently at ₹22/kg, may rise in the coming months.

To hedge against this, they consider buying a call option with the following details:

Strike Price: ₹24/kg

Premium: ₹1 per kg

Contract Size: 10,000 kg

Q2: If the market price of wheat at expiry becomes ₹26/kg, should the company exercise the option? Calculate the net gain or loss.
